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**50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Proposal To List the White River Spinedace (*Lepidomeda albivallis*) as an Endangered Species and Determine Critical Habitat**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** The Service proposes to determine the White River spinedace (*Lepidomeda albivallis*) to be an endangered species. This action is being taken because five populations of this species have been eliminated and others have been greatly reduced due to channelization and diversion of its spring habitats. The introduction of exotic fishes, which compete with and prey on the White River spinedace, has also been a primary cause of the decline. The White River spinedace occurs in remnant waters of the pluvial White River system in southern White Pine County and extreme northeastern Nye County, Nevada. Critical habitat is included with this rule. This proposal, if made final, would implement Federal protection provided by the Endangered Species Act of 1973, as amended. The Service seeks data and comments from the public on this proposal.

**DATES:** Comments from all interested parties must be received by July 30, 1984. Public hearing requests must be received by July 13, 1984.

**ADDRESSES:** Comments and materials concerning this proposal should be sent to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 N.E. Multnomah Street, Portland, Oregon 97232. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** Mr. Don Sada, U.S. Fish and Wildlife Service, Great Basin Complex, 4600 Kietzke Lane, Building C, Reno, Nevada 89502 (702/784-5227).

**SUPPLEMENTARY INFORMATION:  
Background**

The White River spinedace was described as a full species (*Lepidomeda albivallis*) by Miller and Hubbs (1960). Miller and Hubbs (1960) based on material collected in 1934. It is a large species of *Lepidomeda*, often attaining a length of 4 to 5 inches (Miller and Hubbs 1960) distinguish the White River spinedace from other species of *Lepidomeda* in possessing a pharyngeal tooth formula of 5-4 in the main row, typically fewer than 90 lateral-line scales, a moderately oblique mouth, a dorsal fin of moderate height, and distinctive coloration.

The White River spinedace is one of six species belonging to the Plagopterin, a unique tribe of cyprinid fishes. Members of the Plagopterini are restricted to the lower Colorado River system and are characterized by the possession of two spinal rays in the dorsal fin and reduction in scalation in certain taxa (Miller and Hubbs 1960, Uyeno and Miller 1973). The White River spinedace is the representative of the tribe within the upper White River system of southern White Pine County and extreme northeastern Nye County, Nevada. During pluvial times, 10,000 to 40,000 years before present, the White River was tributary to the Colorado River by way of the Virgin River (Hubbs et al. 1974). As the pluvial waters desiccated as the result of more xeric climates, the White River spinedace was restricted to permanent waters such as springs or perennial sections of the White River. Currently, the White River is dry for much of its course.

Historically, the White River spinedace was known from Preston Big Nicholas, Arnoldson, Cold, Lund Town and Flag Springs as well as from the White River near its confluence with Ellison Creek (Miller and Hubbs 1960, Williams and Wilde 1981). The species has been extirpated from all but Lund Town Spring and Flag Springs.

The primary threats to the continued existence of the White River spinedace are the channelization and diversion of water within the spring habitats as well as the introduction of exotic fishes such as guppies (*Poecilia reticulata*), mosquitofish (*Gambusia affinis*), and goldfish (*Carassius auratus*). The exotic fishes compete with and, in some instances, prey on the spinedace.

Viable populations of the White River spinedace still exist in Lund Town Spring and Flag Springs although the former locality contains established populations of exotic species. Both spring systems have been altered by manmade activities.

On December 30, 1982, the Service published a notice of review in the *Federal Register* (47 FR 58454-58460) of vertebrate animal taxa being considered for addition to the List of Endangered and Threatened Wildlife. The White River spinedace was included in this notice as a category 1 species indicating that the Service had substantial information to support the biological appropriateness of proposing its listing.

On April 12, 1983, the Service received a petition from the Desert Fishes Council requesting that the White River spinedace along with 16 other fish species be added to the List of Endangered and Threatened Wildlife. The Service published in the *Federal Register* (48 FR 27273-27274) on June 14, 1983 a finding that the petition presented substantial information that the petitioned action may be warranted. Publication of this rule constitutes the required 12-month finding in accordance with Section 4(b)(3)(B)(ii) of the Act.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate 1982 Amendments) set forth the procedures for adding species to the Federal lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in Section 4(a)(1) of the Act. These factors and their application to the White River spinedace (*Lepidomeda albivallis*) are as follows:

**A. The present or threatened destruction, modification, or curtailment of its habitat or range.** When the White River spinedace was described by Miller and Hubbs in 1960, the species was present in large numbers throughout its known range. By 1979 (Hardy 1980), the spinedace was considered rare in all localities surveyed. Physical and biological habitat alteration have precipitated this decline. During the latter one-half of this century, agriculture and residential use increased around White River spinedace habitat because of the abundant water supply. The water supply was readily "controlled" by channelizing the spring flows and developing diversion structures along outflow creeks. These changes reduced available habitat for the spinedace and caused significant population declines. Continued channelization and diversion of the water supply threatens the remaining habitat of the White River spinedace.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** None apparent.

**C. Disease or predation.** See components below under criterion E.

**D. The inadequacy of existing regulatory mechanisms.** The State of Nevada has placed the White River spinedace on its Protected Species List. However, this action does not provide protection to the species on Federal land, or from federally-funded or approved projects on private land.

**E. Other natural or manmade factors affecting its continued existence.** The introduction of exotic organisms, especially fishes, is detrimental to the White River spinedace. The establishment of guppies (*Poecilia reticulata*) and mosquitofish (*Gambusia affinis*) in habitats occupied by the White River spinedace has been particularly harmful. In general, the introduction of exotic fishes is usually detrimental to native fishes because of competition, predation, or the introduction of exotic parasites and diseases (Deacon *et al.*, 1964, Hubbs and Deacon 1964).

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in the preparation of this proposed rule. Based on this evaluation, the preferred action is to list the White River spinedace as endangered. The elimination of five populations and the reduction of others because of channelization and diversion activities in this fish's spring habitats, as well as competition and predation from exotic species, indicate that it is imminently threatened with extinction. Therefore, a proposed endangered classification is warranted.

Recent status surveys have been instrumental in assessing essential habitat and the present condition of the White River spinedace. Overcollection is not the primary threat facing this species. For these reasons the Service does not believe that determining critical habitat for the White River spinedace will contribute to its further decline; hence, this proposed rule includes a proposal for critical habitat.

#### Critical Habitat

Critical habitat, as defined by Section 3 of the Act of the Section 4 regulations means: (i) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or

protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

The Act requires that, at the time of proposal, critical habitat be determined to the maximum extent prudent and determinable. The critical habitat being proposed for the White River spinedace (*Lepidomeda albivallis*) is in southern White Pine County and extreme northeastern Nye County, Nevada, and consists of Preston Big Spring, Lund Town Spring and Flag Springs, as well as the associated outflows of each of these spring systems. Although the White River spinedace has been eliminated from Preston Big Spring, this spring is included as critical habitat in that it fits the definition of critical habitat as area currently outside the geographical area occupied by the species that are essential for its conservation. Recovery efforts would include the reintroduction of the White River spinedace into Preston Big Spring, thereby increasing the population numbers and genetic viability of this species. A precise description of the critical habitat is given below in the "Regulations Promulgation" section.

The areas proposed as critical habitat for the White River spinedace satisfy all known criteria for its ecological, behavioral, and physiological requirements.

The most critical element to survival of the proposed spinedace are the consistent quality and quantity of springflows. The critical habitat includes the springs and associated outflows as well as riparian areas immediately surrounding these aquatic areas. These riparian areas provide vegetative cover that contribute to providing the uniform water conditions preferred by the spinedace and provide habitat for insects and other invertebrates which constitute a substantial portion of its diet. The designation of these narrow, riparian land areas as critical habitat is proposed due to the essential role they play in the conservation of this species.

Section 4(b)(8) of the Act requires, to the maximum extent practicable, that any proposal to determine critical habitat to be accompanied by a brief description and evaluation of those activities which, in the opinion of the Secretary, may adversely modify such habitat if unpermitted or which in turn may be impacted by such designation.

Activities that may adversely affect the critical habitat of the White River spinedace include pollution of the

springwater, introduction of exotic species, excessive pumping of water from nearby aquifers, and further physical modification of the spring areas such as channelization and diversion of springflows or clearing of the surrounding vegetation.

Currently, there are no known Federal activities believed to be affected by the designation of critical habitat for this species.

#### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species which are initiated by the Service following listing. The protection required by Federal agencies and taking and harm prohibitions are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Section 7(a)(4) requires Federal agencies to informally confer with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. When a species is listed, Section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or result in the destruction or adverse modification of its critical habitat. If a "my affect" determination is made, the Federal agency must enter into formal consultation with the Service. However, no such Federal involvement or impact is known or expected for this species.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce listed species. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and

State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered animal species under certain circumstances. Regulations governing permits are at 50 CFR 17.22. Such permits are available for scientific purposes or to enhance the propagation or survival of the species.

#### Public Comments Solicited

The Service intends that any final rule adopted will be as accurate and as effective as possible in the conservation of each endangered or threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

- (1) Biological or other relevant data concerning any threat (or lack thereof) to the White River spinedace;
- (2) The location of any additional populations of the White River spinedace and the reasons why any habitat of this species should or should not be determined to be critical habitat as provided by Section 4 of the Act;
- (3) Additional information concerning the range and distribution of this species;
- (4) Current or planned activities in the subject area and their possible impact on the White River spinedace; and
- (5) Any impacts resulting from the determination of critical habitat.

Final promulgation of the regulations on the White River spinedace will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests must be made in writing and addressed to the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 N.E. Multnomah Street, Portland, Oregon 97232.

#### National Environmental Policy Act

In accordance with a recommendation from the Council on Environmental Quality (CEQ), the Service has not prepared any NEPA documentation for this proposed rule. The recommendation from CEQ was based, in part, upon a decision in the Sixth Circuit Court of Appeals which held that the preparation of NEPA documentation was not required as a matter of law for listings under the Endangered Species Act. *PLF v. Andrus*, 657 F.2d 829 (6th Cir., 1981).

#### Authors

The primary authors of this proposed rule are Dr. Jack E. Williams, Endangered Species Staff, U.S. Fish and Wildlife Service, Room E2740, Federal Building, 2800 Cottage Way, Sacramento, California 95825 and Dr. James E. Deacon, Biology Department, University of Nevada, Reno, Nevada 89557. Ms. Linda M. Hurley of the Service's Washington Office served as editor.

#### References

- Deacon, J. E., C. Hubbs and B. J. Zahuranec. 1964. Some effects of introduced fishes on the native fish fauna of southern Nevada. *Copeia* 1964:384-388.
- Hardy, T. 1980. The Inter-basin area report—1979. *Proc. Desert Fishes Council* 11:5-21.
- Hubbs, C. and J. E. Deacon. 1964. Additional introductions of tropical fishes into southern Nevada. *Southwestern Nat.* 9:249-251.
- Hubbs, C. L., R. R. Miller and L. C. Hubbs. 1974. Hydrographic History and relict fishes of the north-central Great Basin. *Memoirs California Acad. Sci.* 7:1-259.
- Miller, R. R. and C. L. Hubbs. 1960. The spiny-rayed cyprinid fishes (Plagopterini) of the Colorado River System. *Misc. Publ. Mus. Zool., Univ. Michigan* 115:1-39.
- Uyeno, T. and R. R. Miller. 1973. Chromosomes and the evolution of the Plagopterin fishes (Cyprinidae) of the Colorado River system. *Copeia* 1973:776-782.
- Williams, J. E. and G. R. Wilde. 1981. Taxonomic status and morphology of isolated populations of the White River springfish, *Crenichthys baileyi* (Cyprinodontidae). *Southwestern Nat.* 25:485-503.

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Proposed Regulations Promulgation

#### PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*)

2. It is proposed to amend § 17.11(h) by adding the following in alphabetical order under the heading "Fishes" to the list of Endangering and Threatened Wildlife:

#### § 17.11 Endangered and threatened wildlife.

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Fishes							
Spinedace, White River	<i>Lepidomeda albivallis</i>	U.S.A. (NV)	Entire	E		17.95(e)	NA.

3. It is further proposed to amend § 17.95(e) *Fishes*, by adding critical habitat of the White River spinedace (*Lepidomeda albivallis*), in the same alphabetical order as the species is listed in § 17.11(h), as follows:

§ 17.95 Critical habitat—fish and wildlife.

(e) \* \* \*

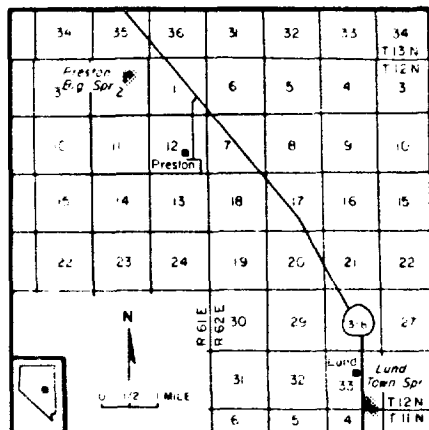
**White River Spinedace**

(*Lepidomeda albivallis*)

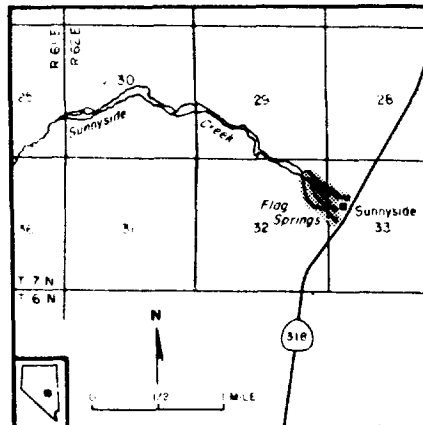
Nevada, White Pine County. Each of the following springs and outflows plus surrounding land areas for a distance of 50 feet from these springs and outflows:

Preston Big Spring and associated outflows within T12N, R61E, NE¼ Sec. 2.

Lund Town Spring and associated outflows within T11N, R62E, NE¼ of NE¼ of Sec. 4: T12N, R62E, S½ of SE¼ Sec. 33.



Nevada, Nye County. Flag Springs and associated outflows plus surrounding land areas for a distance of 50 feet from the springs and outflows within the following areas: T7N, R62E, SE¼ of NE¼ Sec. 32, SW¼ of NW¼ Sec. 33.



Known constituent elements include the consistent quality and quantity of cool springs and their outflows and surrounding land areas that provide vegetation for cover and habitat for insects and other invertebrates on which the species feeds.

Dated: May 16, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

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